

WHAT IS CLAIMED IS:

1. A multi-loop oscillator comprising:

first to Nth delay loops, wherein oscillation signal
5 having a predetermined period is generated by selecting one
of first to Nth delay loops according to potential variation
of a supply voltage.

2. The multi-loop oscillator as claimed in claim 1,
10 further comprising a loop selection section for selecting one
loop from among the first to the Nth delay loops, according
to potential variation of the supply voltage.

3. The multi-loop oscillator as claimed in claim 2,
15 further comprising a supply voltage detection circuit section
for detecting variation of the supply voltage, and the supply
voltage detection circuit section controls an operation of
the loop selection section.

20 4. The multi-loop oscillator as claimed in claim 1,
wherein a delay time is gradually reduced from the first
delay loop to the Nth delay loop.

5. The multi-loop oscillator as claimed in claim 4,

wherein the first delay loop is selected and the oscillation signal has a lowest frequency, when the supply voltage exceeds the maximum reference value.

5 6. The multi-loop oscillator as claimed in claim 5, wherein one loop from among the second loops "LOOP2" to the Nth loop "LOOPn" is selected when the supply voltage is less than the maximum reference value.

10 7. The multi-loop oscillator as claimed in claim 6, wherein the Nth loop "LOOPn" is selected when the supply voltage is not exceeding than the minimum reference value.

 8. The multi-loop oscillator as claimed in claim 1,
15 wherein each of the first to the Nth delay loops includes an inverter chain.

 9. The multi-loop oscillator as claimed in claim 8,
wherein the supply voltage is used as a driving voltage of
20 the inverter chain.

 10. A multi-loop oscillator comprising:
a loop circuit section for forming a plurality of loops
for generating oscillation signals having different

frequencies in response to an enable signal;

a supply voltage detection circuit section for detecting
a supply voltage level and generating a plurality of
selection signals corresponding to the detected supply
5 voltage level;

a loop selection section for selecting one loop from
among the plurality of loops in response to the plurality of
selection signals, and inverting and outputting an input
signal; and

10 an output section for buffering and outputting an
oscillation signal of the loop selected by the loop selection
section.

11. The multi-loop oscillator as claimed in claim 10,
15 wherein each of the plurality of loops is constructed by an
inverter chain.